



Cover page

Project title: RoCu Academic Year: Summer 2022
Group Members: Waseem Ghazal Department Name: Computer Engineering
Aya Abu Ali

Project Type: Hardware
Supervisor Name: Dr.Emad Natsheh

Format:

Single space, Times New Roman.
12 pt,
Maximum 1 page.

Abstract Body:

Items must be provided in the Abstract:

Why do you think this project is important? Please explain the significance of this Project in brief.

In your point of view what are the important aspects that should be covered in the project?

Objective(s): In your view, please explain the main objectives of the project.

Methodology: Give a brief outline of the application development process.

Had this project been done before? Are there any similar applications available today?

Note: Please deliver this abstract early to ensure that your project has been approved by the department's projects committee. **Registration will not be done without this approval.**



Project's Abstract:

Solving Rubik's cube in a short time making the players want to improve themselves and become faster in solving the Rubik's cube.

Features the application should include :

- 1- the ability to read all 6 faces of the cube.
- 2- Provide a built-in timer.
- 3- A sign to show that the cube was solved.

Methodology:

The main idea is to build robotic arms that hold the cube and rotate the faces to solve it.

In order to achieve that, we study how humans solve the cube and how to achieve the same effect with the robot, then we improve on the way humans solve it, then we build a single arm to see how it could move the cube, then we build the rest of the arms and assemble them, we build the algorithm that solves the Rubik's cube by reading a lot of research on Rubik's cubes. The final stage is to translate the algorithm to hardware moves.

After all the stages are done, the output will be a robot that solves a Rubik's cube.

The project has been done professionally before but the actual goal is to make our project the building block for other projects and games.